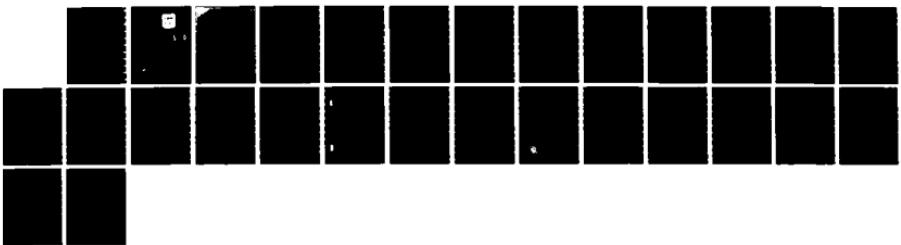


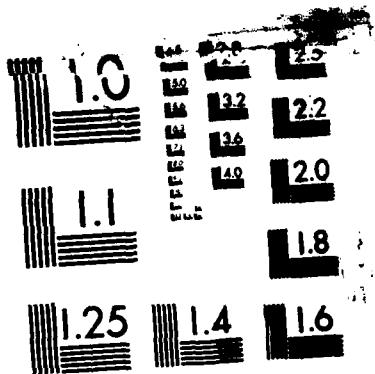
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# STUDENT ESSAY

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THE COST OF SWEDEN'S NEUTRALITY: NO FREE RIDE

BY

MR. F. BRENNER BACHMANN, USFS

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support, as is illustrated in the decision to maintain the Swedish aircraft industry. The "Whiskey on the Rocks" incident plus other submarine violations of Swedish waters have served to focus attention on the weakening defense situation. Despite a sophisticated arms industry, if Sweden hopes to maintain its defense capability in the years ahead, it will be forced to look increasingly abroad for technology and components. Thus the U.S. role in Swedish defense is bound to increase. ↗

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**USAWC MILITARY STUDIES PROGRAM PAPER**

**THE COST OF SWEDEN'S NEUTRALITY: NO FREE RIDE**

**INDIVIDUAL ESSAY**

by

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Carlisle Barracks, Pennsylvania 17013  
30 April 1986

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## ABSTRACT

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In the twentieth century Sweden has formalized its policy of "non-participation in alliances in peacetime aiming at neutrality in the event of war." But this neutrality, nearly universally supported by all Swedes, has not come cheap. Compared to her Nordic neighbors as well as other European neutrals, Sweden has a significant defense effort despite a gradual decline in expenditure as a percent of GNP over the past 15 years. The "Made in Sweden" label on defense equipment is essential for political support, as is illustrated in the decision to maintain the Swedish aircraft industry. The "Whiskey on the Rocks" incident plus other submarine violations of Swedish waters have served to focus attention on the weakening defense situation. Despite a sophisticated arms industry, if Sweden hopes to maintain its defense capability in the years ahead, it will be forced to look increasingly abroad for technology and components. Thus the US role in Swedish defense is bound to increase.

## INITIAL IMPRESSIONS

For the past ten years I have been an occasional traveler to Sweden and have watched my views and knowledge of that country change depending on my point of orientation. During my first extended visit I was on leave from Hungary and was astounded at the freedom of the Nordic countries. This was especially true at border crossings which were nearly nonexistent despite differences in language or bloc affiliation. Several years later, when assigned to Norway, Sweden was the closest destination for "bright lights" and more variety in consumer goods. One knew when he had crossed the border because the roads became highways and the industrial base of Sweden clearly was broader than that of her Norwegian cousins. More recently, I would journey to Sweden from Jordan on R&R and be impressed by the verdant forests, neat fields, and almost unlimited fresh water. The Swedish military was conspicuously absent in these mental snapshots, but now, with an assignment to Stockholm in the offing, for the first time I have started to focus on the Swedish defense establishment and its role in the nation's economy.

## HISTORY

Sweden, as any schoolboy would tell us, is one of the two Nordic neutral countries. But unlike Finland, Sweden is neutral by choice. She has not been involved in a war since 1814 and managed to remain neutral during the two great conflicts of our century through a combination of skill, strength, and luck. As a Swedish fact sheet proudly points out: "Sweden pursues a policy of nonparticipation in alliances in



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peacetime, aiming at neutrality in the event of war." For good measure the author reminds us: "The country's defense is based entirely on its own financial resources."<sup>1</sup>

John Keegan in an excellent summary of the Swedish military scene observes that the martial achievements of expansionist Sweden in the 17th and 18th centuries were all the more remarkable since they were gained with "a conscripted native army, not one of foreigners or mercenaries like those fielded by most of her enemies." In 1544, Sweden raised what is generally regarded as the first national army in Europe and sustained it in fighting efficiency for 200 years. This military establishment was gradually transformed "into a modern citizen militia without the provocation of any of those civil-military disputes which have marred the constitutional development of other warring states."<sup>2</sup>

Swedish neutrality, which has been official government policy since 1914--after already 100 years without a war--is also flavored with a healthy dose of Scandinavian idealism plus good old protectionism. Thus, while one may associate Sweden with disarmament, staunch support of the UN, and as a shrill protester against US policy in the Vietnam war, it is clear that Sweden has not had a "free ride" as far as defense is concerned. But the country's military achievements receive scant attention in the US general press--the recent embarrassing sub incidents alone rate headlines. And who ever heard of a Swedish Army knife?

It is not my purpose in this brief paper to rehash the excellent professional articles that have been written on Sweden as a lynchpin of Nordic defense or compare Nordic defense policies.<sup>3</sup> Rather, I hope

to show how the Swedish defense effort compares with her neighbors and other European neutrals.

As Paul M. Cole observes, despite their common idealistic streak, "The Nordic nations can be very hard-nosed when it comes to their own security," for "the realist tradition always exists with the idealist." Cole makes the further observation that any person from this region is a Dane, Norwegian, Icelander, Finn, or Swede first, a Nordic citizen second, and a European third. The countries share the common view that their individual policies are in the interest of each Nordic nation and that these policies, in turn, are also in the interest of the superpowers and their allies.<sup>4</sup>

By almost any indicator Sweden is the dominant Nordic country and her military establishment reflects this position. What Sweden has done with her 8.3 million population is neatly outlined in The Military Balance which provides an overview for the curious reader. (Annex I)<sup>5</sup> Keegan fleshes this out in his conclusion on Sweden:<sup>6</sup>

The organisation of the Swedish army remains the most impressive example of the militia principle in action to be found outside Israel. The morale of the serving soldiers, the commitment of the youth of military age and the support of the general population are high. Sweden's defence problem is not therefore, as it is in some other Western European countries, a human one. It is economic. The country has been marvellously successful at designing and developing military equipment of the first class for much of this century. But it is now widely felt that the costs of the next generation of equipment, particularly of aircraft but also of ground fighting vehicles and ordnance, which already alarm the defence ministries of the large military powers, may be too great for Sweden to bear. The effects of the recession of the 1970s have been felt particularly

severely there but, even if that were not so, it would seem probable that the country, if it is to provide its servicemen with equipment of the standard to which they are accustomed, will have to purchase from abroad. Although foreign equipment has been purchased before, the quantities have been kept small, with a view to avoiding any compromise of the principle of neutrality. If Sweden is now obliged to buy in large quantities, she may find herself committed willy-nilly to an alliance with her supplier. The issue is of even greater importance for Swedish diplomacy than for Swedish defence.

With this as basic background I will turn to the contemporary scene for a survey of where defense expenditure fits into the Swedish scheme.

#### NO FREE RIDE

Lest one think Swedish neutrality comes cheap, one need only view Chart 1 in World Military and Social Expenditure (Annex II) where Sweden ranks 18th globally in a rough indicator of cumulative military expenditure from 1960-1981.<sup>7</sup> Although the Gulf War may change the rankings slightly, Sweden, with a \$37 billion expenditure will no doubt retain her relative position. Of our NATO allies, she had "outspent" all but the US, West Germany, France, Italy, Canada, and the Netherlands. Of her neighbors, Denmark and Norway tie for 38th place at \$14 billion while Finland does not even make the chart. Little Switzerland, the most famous neutral, comes in 32nd at \$18 billion.

Viewed by the US Arms Control and Disarmament Agency (ACDA) in constant 1982 dollars, Sweden's defense burden as a percent of GNP is exceeded only by the US and West Germany if one considers only NATO members. The table at Annex III tells the tale.<sup>8</sup>

In Sweden over the past 15 years military expenditure as a percent of GNP as well as a percent of central government expenditure has been gradually declining from 3.6% of GNP and 12.2% of central government expenditure in 1969 to 3.3% and 6.5% in 1983. The ACDA statistics collected in Annex IV outline the trend for Sweden plus her Nordic neighbors (less Iceland), the two other European neutrals, plus the superpowers, for comparative purposes. Despite cutbacks Sweden clearly continues to surpass other Western European countries in terms of military expenditure as a percent of GNP. Only Norway exceeds Sweden on military expenditure per capita.<sup>9</sup>

After 172 years, neutrality is embraced by Swedes at all points on the political spectrum though, as the Economist recently pointed out, the policy has taken a few knocks:

Neutralit has long been Sweden's holiest cow. No politician in Stockholm would venture to look it in the mouth, let alone slaughter it. Yet today it shows bruises: some inflicted by alien frogmen and the submarines that keep bumping along Sweden's coasts, some by the country's own political parties, which have taken to picking up the sacred animal and hitting each other with it.<sup>10</sup>

Part of the problem in recent years has been that paying for a credible defense has become more and more expensive as technology has advanced faster than the will or ability to pay for new systems. Subs actively violating Swedish waters and cruise missiles with the potential of traversing Swedish air space call for a stronger defense effort, but it has been hard to muster the political will to do more.

Even before the 1981 "Whiskey on the Rocks" incident, Sweden was forced to make a major aircraft procurement decision with serious ramifications both to the budget and to key engineering industries. Sparsely populated in the north and with a 2,000 mile coastline, Sweden, if she is to remain a major player in Nordic security, demands a respectable air defense capability. In the early 80's the Swedish air force consisted of some 410 combat aircraft, compared with 480 in the FRG and 460 in France. But the "Draken" and "Viggens" were getting old and in 1978 with the Social Democrats unusually out of office, a controversial decision had been made to go ahead with the development of a new general purpose Swedish plane.<sup>11</sup> Although many in the military would have preferred to break with tradition and purchase F-16's or F-18's for political or employment reasons, the Swedes opted to go ahead with the JAS-39 or "Gripen." The wheeling and dealing that went into the decision are thoroughly discussed by William Taylor<sup>12</sup> and need not be reviewed here. What is of interest is the Swedish consensus that the country's aircraft industry was to be kept alive. When the Palme government returned to power, it quietly agreed to go ahead with the Gripen. Indeed, some astute observers of the Scandinavian scene would argue that the "Made in Sweden" label on a major item--no matter how many foreign components it might actually contain--is essential in selling defense spending to the stressed Swedish taxpayer.

Aside from limited Draken sales to Denmark, Finland and Austria, Sweden has had little success in selling its aircraft to other countries.

In 1977 a major sale of Drakens to India was vetoed by the US as the plane had a GE engine over which the US retained final control. With memories of aircraft development cost overruns still fresh in Swedish minds, the decision to go ahead with the purchase of 140 Gripens was not an easy one. And with at least 30 percent of the components coming from foreign sources (compared with 20 percent in the Draken), the \$3.5 billion project is subject to considerable price variations due to currency rate fluctuations.

The "Whiskey on the Rocks" incident in Karlskrona in October 1981, followed by further serious sub-sightings in the Stockholm area in October 1982 with 40 confirmed intrusions for that year alone, roused the public consciousness to the weakness of Swedish ASW efforts. An immediate result of these intrusions was a \$136 million program to improve and expand Sweden's helicopter-borne ASW activities<sup>13</sup> plus tougher rules of engagement regarding unidentified subs. The new policy coincided with the development of more effective lethal and nonlethal ASW ordnance.<sup>14</sup>

Along with a ten-year ASW enhancement program, Sweden is also building a new generation of subs and fast patrol boats which should aid in her coastal defense.

In recent years the Swedish Navy was in a state of decline as indicated by the selling off of capital ships. During this period the main battle for defense funds was played out between the Air Force and the Army. But Karlskrona and the 1983 government report on sub intrusions changed the picture (and upped the ante) considerably. But between the new Gripen purchase for the Air Force plus the Naval upgrade, one wonders

how the Swedish Army will fare in its quest for a replacement for the "S" tank due in the mid-nineties.

In a country where full employment is "mandatory" and every job counts, Sweden's defense industries in 1982 accounted for some 32,000 man-years of work. This was about 10 percent of employment in the country's engineering sector. The aviation industry counted for about 9,000 jobs. In line with global trends, Sweden's defense industries are becoming more concentrated. At present the thirteen companies outlined in Annex V are receiving about 80 percent of defense orders.<sup>15</sup>

One of the ironies of "neutral Sweden's" defense policy is that despite a very serious concern for disarmament issues, the country is actively involved in the arms trade. As one might expect, political restrictions are numerous and designed to minimize sales to lands or groups which might actually use the weapons. In response to criticism from domestic peace groups the Swedish government replies that arms sales are essential if the country is to keep local defense firms viable and production costs within reasonable limits.

By examining ACDA statistics in Annex VI, one can compare the importance of the arms trade among the Nordics, neutrals, and superpowers.<sup>16</sup>

It is clear that arms transactions are not a major component in overall Swedish trade. Arms exports are clearly of more importance to Austria and Switzerland--to say nothing of the Soviet Union and the United States. The occasional unauthorized transfer by Swedish firms normally gets hot press treatment as in recent cases of Bofors sending

munitions to the Persian Gulf. Transactions through overseas subsidiaries of Swedish firms are more difficult to control as is the sale of components as opposed to finished products.

Looking at "the U.S. connection" it is clear that US technology and components are of vital importance to the Swedish defense establishment. Although Sweden attempts to diversify her external sources of supply, the US is the dominant source. Offshore procurement is also essential to save on R&D costs. Although the figures are crude, during the period 1979-1983 out of a total of \$530 million of arms transfers purchased abroad, Sweden obtained \$230 million from the US. The UK was second with \$130 million, while France and Italy had a mere \$5 million each.<sup>17</sup> The neutral Sweden buys no arms from Warsaw Pact countries.

While some may argue that Sweden is "NATO's silent partner"<sup>18</sup> or that by US standards Sweden is no longer pulling her weight on the Northern flank,<sup>19</sup> it is clear that the Swedes want US technology and are willing to take measures to assure continued access to it. While there have been one or two bilateral technology transfer problems, these appear to be history. The US for its part remains concerned over "dual use technology" but recently has reached an agreement on "enhanced protection for sensitive use technology" which assures self-policing by Swedish industry. The bottom line for the Swedes is they need access to US technology if they hope to remain competitive in the defense arena.

The flip side of the coin is that the US has keen interest in various Swedish developments. The latest example is the licensing agreement

between the major Swedish defense firm FFV and Honeywell for the Swedish AT-4 lightweight antiarmor weapon. The US Army plans to buy some 362,000 AT-4s over the next five years. FFV via its Washington office is looking for more sales in the US market.

#### LOOKING AHEAD

In November 1985, responding to government guidance to investigate a five-year program at three different levels of expenditure, the Swedish Supreme Commander (i.e. JCS Chairman equivalent) decried the diminishing share of the defense budget for the past 15 years and called for three percent real growth for the next five years. This would mean an average increase of \$290 million per annum on the \$3 billion Swedish defense budget. For the first time in 25 years all non-communist parties agree defense needs beefing up, but due to economic conditions and the difficulty in cutting social programs, it is unrealistic to expect a real 3% increase or even the 2% proposed by the moderates.<sup>20</sup>

Now as Sweden strives for still greater political consensus in the wake of the Palme assignation budget discussions center not on defense but on hikes for child allowances, pensions and energy taxes.<sup>21</sup>

Faced with high production costs and few possibilities of economies of scale through large export orders, the Swedish military is attempting to play "catch-up" in an increasingly expensive game. But absent a sharp infusion of political desire and fiscal input it appears that Sweden's defense posture will be forced to take on a more territorial tone. The

navy is becoming more coastal oriented and the leaner air force lacks the numbers of planes required for a more outward-looking defense posture.

The combination of the Karlskrona incident, the unresolved assassination of Olof Palme, and, most recently, the fallout over the Soviet nuclear reactor meltdown may spur thinking Swedes to the realization that their kingdom is not immune from the problems which plague less fortunate countries.

As a study of the tables in the annexes clearly points out in crude economic terms, Sweden has paid her way as far as defense spending is concerned. A careful reading of Swedish items for the past several years in Jane's Defense Weekly and Aviation Week demonstrates that despite the wish for self-sufficiency in the arms arena, Sweden is going increasingly off-shore for key components of her domestic defense systems. This is a logical move and binds her firmly to the West since her policy of non-alignment certainly does not apply to defense procurement.

The US has become Sweden's number one export market and is her third largest supplier. Our total bilateral trade in 1985 reached \$5.9 billion. In the years ahead as the "Made in Sweden" label covers more "cosmopolitan" Swedish defense products, I feel that the US role in Swedish defense programs can only increase.

Defense costs will remain high for Sweden. Perhaps Walter Lippmann has the most appropriate conclusion to sum up this situation:<sup>22</sup>

You took the good things for granted. Now you must earn them again. For every right that you cherish, you have a duty which you must fulfill. For every good that you wish to preserve, you will have to sacrifice your comfort and your ease. There is nothing for nothing any longer.

## ENDNOTES

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4. Paul M. Cole, Comparative Nordic Decisionmaking, p. 189.
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6. Keegan, p. 553.
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9. Ibid., *passim*.
10. Andrew Boyd, "Bruised and Needing New Teeth," The Economist, October 6, 1984.
11. For an overview of the situation facing the Air Force, see David A. Brown, "Sweden Adjusts to Military Reductions," Aviation Week and Space Technology, January 23, 1984, p. 101.
12. William J. Taylor, "The Defense Policy of Sweden," in Murray and Viotti, The Defense Policies of Nations: A Comparative Study, pp. 29.
13. For an overview of the problems of inshore sub hunting, see Jim Bussert, "Inshore ASW: Is the Navy Ready," Defense Electronics, March 1986, p. 77 ff. See also "Sweden: Neutrality's High Price" in the Times (London), February 20, 1985.
14. For an overview of naval improvements, see Anthony Preston, "A New Generation of Swedish Strike Craft," Jane's Defense Weekly, February 4, 1984, pp. 159-165.
15. See "Swedish Defense in Economic Context," Airgram 31, US Embassy, Stockholm, June 14, 1983.
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18. James E. Keys, "Sweden: NATO's Silent Partner?" Naval Post-graduate School, 1984.
19. Manfred R. Hamm, "Ten Steps to Counter Moscow's Threat to Northern Europe," The Heritage Foundation Backgrounder, May 30, 1984.
20. See "OB85 Perspektivplan Del II, Stockholm 1985-10-01 (in Swedish) or US Embassy Stockholm telegram 85-2667 for an English summary.
21. See US Embassy Stockholm telegram 2601 (18 March 1986) for a discussion of the current economic policy debate.
22. Quoted in James Reed Golden, The Economics of National Security, unnumbered page.

## SWEDEN

GDP 1983: S kr 704.47 bn (\$99.080 bn). 1984: 784.03 bn (\$98.936 bn).  
 GDP growth 1983: 2.3%. 1984: 3.0%.  
 Inflation 1983: 9.3%. 1984: 8.2%.  
 Debt 1983: \$39.9 bn. 1984: \$47.5 bn.  
 Def budget 1984/5: S kr 23.671 bn (\$2.676 bn).  
 1985/6: 25.081 bn (\$2.784 bn).  
 \$1 = kronor 7.1101 (1983), 7.9246 (1984),  
 8.846, (1984/5), 9.0081 (1985).  
 Population: 8,343,000.  
 Men: 18-30: 764,000; 31-45: 990,150.  
 Women: 18-30: 730,300; 31-45: 944,200.

## TOTAL ARMED FORCES:

Regular: 65,650 (48,900 conscripts): mobilizable to about 800,000 in 72 hours. 850,000 maximum excl 500,000 auxiliary orgs. 25,000 civilians provide spt services.

*Terms of Service:* Army and Navy 7½-15 months, Air Force 8-12 months.

Reserves (all services; obligation to age 47): 735,500; voluntary auxiliary organizations 500,000.

## ARMY: 47,000 (38,000 conscripts).\*

6 Military commands; 26 Defence districts (*Laens*).

*Peace establishment:*

50 armd, cav, inf, arty, AA, engr, sig spt regts (local defence, cadre for mobilization, basic conscript plus refresher trg).

*War establishment* (700,000 on mobilization, incl 100,000 Home Guard):

4 armd bdes.

1 mech bde.

19 inf, 5 *Norrland* bdes.

60 indep armd, inf, arty and AA arty bns.

1 army aviation bn (4 coys; 40 hel).

11 arty aviation platoons (66 ac and hel).

Local Defence Districts: 100 indep bns, 400-500 indep coys and Home Guard units.

Tks: 340 Strv-101, Strv-102/-104 (*Centurion*), 330 Strv-103B; lt 200 *Ikv-91*. APC: Pbv-302.

Arty: guns: BK-1A 155mm SP; how: Type-4140 105mm, M-39 150mm, FH-77-A and (SP)-B 155mm; mor: 81mm, 120mm. ATK: mt: *Miniman* 74mm, *Carl Gustav* 84mm, PV-1110 90mm; ATGW: RB-53 (*Bantam*), RB-55 (*TOW*).

AD: guns: 20mm, 40mm; SAM: RB-69 (*Redeye*), RBS-70 (incl Lvrby SP), RB-77 (*Improved HAWK*). Avn: ac: 66 SK-61C (*Bulldog*) observation, Do-27 tpt; hel: 15 Hkp-3 (AB-204B) tpt, 10 Hkp-5 (Hughes 300C) trg, 24 Hkp-6 (*Jet Ranger*) utility.

(On order: Pvrby 551 *TOW* veh; 20 BO-105 (Hkp-9A) ATK hel.

\* There are normally some 95,000 more conscripts (70,000 Army, 4,500 Navy, 6,000 Air Force) plus 15,000 officer and NCO reservists doing 11-40 days refresher training at some time in the year. Obligation is 5 times per reservist between ages 20 and 47.

NAVY: 9,650, incl coast arty (6,250 conscripts).\*

10 combat hel.

Bases: Muskö, Härnösand, Karlskrona, Göteborg (spt only).

Subs: 13: 3 *Näcken*, 5 *Sjöormen*, 4 *Draken*; 1 *Mala* two-man.

Destroyer: 1 *Halland*.

FAC: (G): 30: 2 *Stockholm* (*Spica III*) with 6 RBS-15 SSM, 16 *Hugin* with 6 RB-12 (*Penguin*), 12 *Spica II* (R-131) with 4 RBS-15 SSM; (T): 6 *Spica I* (T-121).

Patrol craft: 4 *Hanö* large, 29 coastal incl 11 *Skanör*.

Mine layers: 3 large; 1 trg; 10 coastal, 17 inshore.

MCMV: 2 *Landsort*, 9 *Arko* coastal, 23 inshore.

Amph: tcm: 12; tca: 80; tca: 55.

Icebreakers: 6.

Coast arty: 5 bdes: 30 mobile and static bns: guns: 75mm, 105mm, 120mm, 152mm; ssm: RB-08, RB-52. Coast rangers (coys). Marine: 10 coastal, 17 inshore minelayers; 18 60-/70-class coastal patrol craft; 9 LCM, 80 LCU, 55 LCA.

Hel: 2 sqns with 10 Hkp-4B/C (KV-107) ASW/MCM, 10 Hkp-6 liaison.

(On order: 4 A-17 subs, 4 *Stockholm* FAC(G), 4 *Landsort* minehunters; RBS-15 SSM; 6 MCMV; 6 V/KV-107 ASW hel.)

AIR FORCE: 9,000 (4,650 conscripts);\* 524 combat ac.

1 attack gp.

4 AD districts.

12 wings (liaison ac: 48 SK-50 (Saab 91) *Safir*).

FGA: 6 sqns: 5 with 95 AJ-37 *Viggen*, 1 with 20 SK-60B/C (Saab 105).

AD: 12 sqns: 6 with 109 J-35F *Draken*, 2 with 36 J-35D, 4 with 68 JA-37 *Viggen*.

Recc: 6 sqns: 52 SH/SF-37 *Viggen*; 2 *Caravelle* (ELINT); 3 J-32B *Lansen* (radio activity monitors).

OCU: 1 with 15 SK-37 *Viggen* (6 SK-35C *Draken* in store).

Tpt: 1 sqn with 8 C-130E/H.

Comms units: SK-60A, 2 CT-39 *Sabreliner*, 2 Cessna 404, 1 *Metro III* (leased).

Trg: incl 124 SK-60A/B/C, 57 SK-61, 20 J-32 (14-32E ECM trg, 6-32D target tug).

SAR: 1 sqn with 10 Hkp-4, 10 Hkp-5 hel (2 Hkp-9B (BO-105) for delivery July 1985).

Utility unit: 6 Hkp-2 (to retire), 7 Hkp-3 hel.

AAM: RB-24, AIM-9J/L *Sidewinder*, RB-27 (*Falcon*), RB-28 (*Improved Falcon*), RB-71 (*Skyflash*).

ASM: RB-04E, RB-05A, RB-75 (*Maverick*).

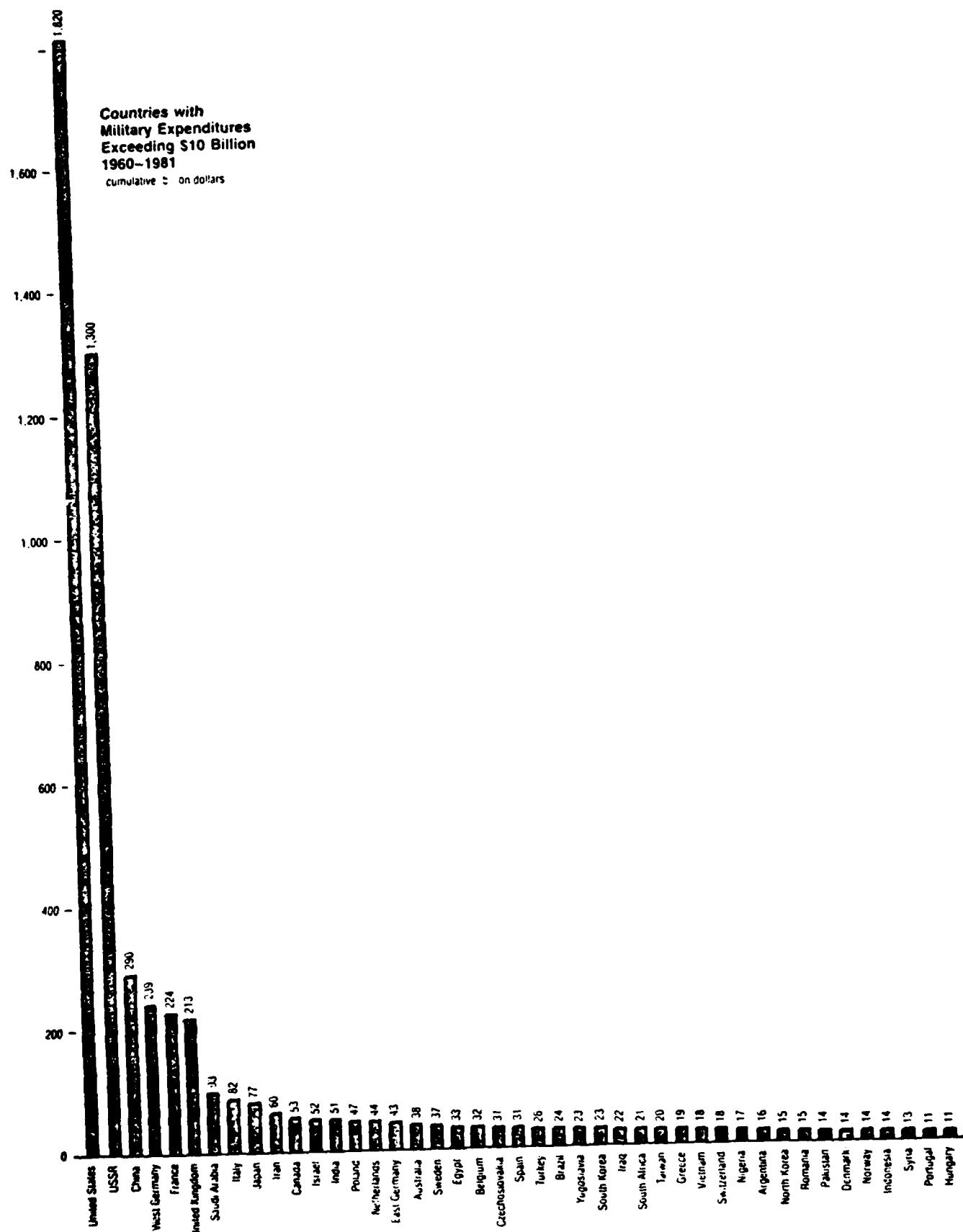
AD: Semi-automatic control and surveillance system, *Stril 60*, co-ordinates AD components.

(On order: 76 JA-37 *Viggen*, 30 JAS-39 *Gripen* multi-role ac, 4 BO-105 SAR hel, RBS-15F, *Hellfire* ASM, AIM-9L *Sidewinder* AAM.)

Forces Abroad: (526). Cyprus (UNFICYP) 1 inf bn (376). Lebanon (UNIFIL) HQ/log/medical tps (150).

PARA-MILITARY: Coast Guard (550): 2 TV-171 fishery protection vessels, 67 patrol craft; (Air Arm): 1 Cessna 337G, 1 402C. Civil Defence: shelters for some 5 million people outside military ages (16-65).

ANNEX II



ANNEX III

Relative Burden of Military Expenditures — 1983

ME/GNP* (%)	GNP PER CAPITA (1982 dollars)					
	Under \$200	\$200-499	\$500-999	\$1,000-2,999	\$3,000-9,999	\$10,000 and over
10% and over	Laos† Vietnam† Kampuchea†	Yemen (Aden) Cape Verde†	Angola Yemen (Sanaa) Zambia† Nicaragua	Iraq North Korea Jordan Syria Mongolia†	Israel Oman Libya Soviet Union	Saudi Arabia Qatar†
5-9.99%	Somalia Ethiopia	China Guyana† Mauritania Guinea† Pakistan Afghanistan†	Egypt Morocco Zimbabwe Peru Honduras†	Lebanon Taiwan Albania† South Korea Cuba† Malaysia Iran	Bulgaria East Germany Greece Czechoslovakia Singapore Poland United Kingdom	United Arab Emirates United States
2-4.99%	Burma Burkina Faso Mali Benin Chad† Bangladesh	Guinea-Bissau† Lesotho Mozambique† India Burundi Equatorial Guinea† Liberia Tanzania Togo Senegal Madagascar Kenya	El Salvador Thailand Swaziland Botswana Indonesia Nigeria Cameroon	Turkey Chile South Africa Yugoslavia Congo Portugal Uruguay Tunisia Algeria Argentina Guatemala	Romania Hungary France Cyprus Belgium Netherlands Trinidad and Tobago Italy Gabon Suriname New Zealand Spain	Kuwait Bahrain West Germany Sweden Norway Australia Denmark Canada
1-1.99%	Zaire Nepal	Central African Republic Sao Tome & Principe Malawi Sri Lanka Haiti Rwanda Uganda	Bolivia† Philippines Sudan Ivory Coast Papua New Guinea	Panama† Paraguay Ecuador Dominican Republic Jamaica Fiji Colombia	Ireland Austria Venezuela Malta Japan	Switzerland Finland Luxembourg
Under 1%		Sierra Leone Niger The Gambia	Costa Rica	Brazil Mexico Ghana† Mauritius	Barbados	Iceland

Source: Table I

\*Countries are listed within blocks in descending order of ME/GNP.

†Ranking is based on a rough approximation of one or more variables for which 1983 data or reliable estimates are not available.

TABLE I. Military Expenditures, Armed Forces, GNP, Central Government Expenditures and Population, 1973-1983, By Region, Organization, and Country—continued

ANNEX IV-1

YEAR	MILITARY EXPENDITURES (ME)		ARMED FORCES Thousands	GROSS NATIONAL PRODUCT (GNP)			CENTRAL GOVERNMENT EXPENDITURES (CGE) Million dollars	PEOPLE Million	ME/GNP	ME/GDP	ME PER CAPITA Constant 1962 dollars	ARMED FORCES PER 1000 PEOPLE	GNP PER CAPITA Constant 1962 dollars								
	Million dollars			Million dollars																	
	Current	Constant 1982		Current	Constant 1982	Constant 1982															
<b>SWEDEN</b>																					
1973	1534	3010	75	44471	87230	28364	8.1	3.5	10.6	371	9.3	10769									
1974	1706	3077	75	50424	90950	30937	8.2	3.4	9.9	375	9.1	11091									
1975	1828	3024	75	56194	92944	31309	8.2	3.3	9.7	368	9.1	11334									
1976	1905	2982	66	60011	93911	34359	8.2	3.2	8.7	363	8.0	11452									
1977	2025	2993	68	62080	91756	36751	8.3	3.3	8.1	360	8.3	11055									
1978	2204	3034	68	67461	92840	39856	8.3	3.3	7.6	365	8.3	11185									
1979	2426	3078	68	76352	96876	42361	8.3	3.2	7.3	370	8.2	11671									
1980	2622	3054	70	84335	98217	43566	8.3	3.1	7.0	368	8.4	11833									
1981	2904	3094	70	90975	96917	45829	8.3	3.2	6.8	372	8.4	11676									
1982	3191	3191	70	96676	96676	46679	8.3	3.3	6.8	384	8.4	11647									
1983	3332	3197	68	102523	98361	49370	8.3	3.3	6.5	385	8.2	11850									
<b>DENMARK</b>																					
1973	511	1004	39	25003	49043	15761	5.0	2.0	6.4	200	7.8	9808									
1974	625	1127	35	26939	48589	17317	5.0	2.3	6.5	225	7.0	9717									
1975	719	1189	34	29053	48054	17629	5.1	2.5	6.7	233	6.7	9422									
1976	752	1177	31	32814	51350	18251	5.1	2.3	6.5	230	6.1	10068									
1977	817	1208	32	35296	52170	19019	5.1	2.3	6.4	237	6.3	10229									
1978	909	1252	33	38272	52670	19762	5.1	2.4	6.3	245	6.5	10327									
1979	1144	1452	33	42591	54040	21035	5.1	2.7	6.9	284	6.5	10596									
1980	1150	1340	33	45980	53549	22294	5.1	2.5	6.0	262	6.5	10499									
1981	1282	1365	33	50295	53581	23760	5.1	2.5	5.7	267	6.5	10506									
1982	1400	1400	30	54911	54911	25363	5.1	2.6	5.5	274	5.9	10767									
1983	1482 E	1421 E	30	58239	55875	31435 E	5.1	2.5	4.5	278	5.9	10955									
<b>NORWAY</b>																					
1973	649	1273	39	20506	40222	15968	4.0	3.2	8.0	318	9.8	10055									
1974	719	1298	40	23372	42156	16742	4.0	3.1	7.8	324	10.0	10539									
1975	864	1429	38	26586	43973	18109	4.0	3.3	7.9	357	9.5	10993									
1976	940	1472	39	29579	46289	21017	4.0	3.2	7.0	368	9.8	11572									
1977	1028	1519	39	32369	47843	22279	4.0	3.2	6.8	380	9.8	11960									
1978	1193	1649	40	36008	49554	23384	4.1	3.3	7.1	402	9.8	12086									
1979	1309	1661	40	40804	51772	24353	4.1	3.2	6.8	405	9.8	12627									
1980	1397	1627	40	46450	54096	24275	4.1	3.0	6.7	397	9.8	13194									
1981	1528	1628	39	51245	54592	23102	4.1	3.0	7.0	397	9.5	13315									
1982	1697	1697	41	54270	54270	23532	4.1	3.1	7.2	414	10.0	13236									
1983	1844	1769	41	57412	55081	17546 E	4.1	3.2	10.1	431	10.0	13434									
<b>FINLAND</b>																					
1973	280	551	40	19666	38574	9764	4.7	1.4	5.6	117	8.5	8207									
1974	275	497	40	22060	39790	10481	4.7	1.2	4.7	105	8.5	8466									
1975	357	591	40	24120	39895	12488	4.7	1.5	4.7	125	8.5	8488									
1976	338	530	36	25527	39947	12920	4.7	1.3	4.1	112	7.7	8499									
1977	376	556	39	27034	39957	13331	4.7	1.4	4.2	118	8.5	8501									
1978	421	579	39	29717	40897	13031	4.8	1.4	4.4	120	8.3	8520									
1979	508	645	36	34749	44090	13852	4.8	1.5	4.7	134	7.5	9185									
1980	659	767	36	39741	46283	14381	4.8	1.7	5.3	159	7.5	9642									
1981	676	720	36	44022	46898	14648	4.8	1.5	4.9	150	7.5	9770									
1982	786	786	36	47844	47844	15589 E	4.8	1.6	5.0	163	7.5	9967									
1983	785 E	753 E	40	51243	49163	14880 E	4.9	1.5	5.1	153	8.2	10033									

TABLE I. Military Expenditures, Armed Forces, GNP, Central Government Expenditures and Population, 1973-1983, By Region, Organization, and Country —continued

ANNEX IV-2

YEAR	MILITARY EXPENDITURES (ME)		ARMED FORCES	GROSS NATIONAL PRODUCT (GNP)		CENTRAL GOVERNMENT EXPENDITURES (CGE)	PEOPLE	ME GNP	ME CGE	ME PER CAPITA	ARMED FORCES PER 1000 PEOPLE	GNP PER CAPITA
	Million dollars			Current	Constant 1982							
	Current	Constant 1982	Thousand									
<b>AUSTRIA</b>												
1973	248	488	60	26939	52841	16955	7.5	0.9	2.9	65	8.0	7045
1974	304	548	60	30588	55172	17923	7.5	1.0	3.1	73	8.0	7356
1975	370	612	50	32759	54201	19312	7.5	1.1	3.2	81	6.7	7226
1976	410	642	40	36523	57249	20828	7.5	1.1	3.1	85	5.3	7633
1977	449	664	37	40351	59640	21578	7.5	1.1	3.1	88	5.0	7952
1978	517	712	40	43727	60178	23545	7.5	1.2	3.0	95	5.3	8023
1979	593	752	40	49902	63316	24589	7.5	1.2	3.1	100	5.3	8442
1980	643	749	40	56112	65349	25390	7.5	1.1	2.9	99	5.3	8713
1981	700	746	40	61356	65364	26203	7.6	1.1	2.8	98	5.3	8600
1982	829 E	829 E	40	66141	66141	26633	7.6	1.3	3.1	109	5.3	8702
1983	937	899	50	69640	66813	28122	7.5	1.3	3.2	119	6.7	8908
<b>SWITZERLAND</b>												
1973	943	1850	25	49661	97409	15296	6.4	1.9	12.1	289	3.9	15220
1974	1049	1892	25	54992	99189	16155	6.4	1.9	11.7	295	3.9	15498
1975	1074	1777	25	55262	91403	16892	6.4	1.9	10.5	277	3.9	14281
1976	1274	1994	25	57861	90546	18477	6.3	2.2	10.8	316	4.0	14372
1977	1291	1968	18	63063	93209	18674	6.3	2.0	10.2	302	2.9	14795
1978	1356	1866	18	67775	93272	18748	6.3	2.0	10.0	296	2.9	14805
1979	1362	1983	23	75600	95922	19281	6.3	2.1	10.3	314	3.7	15225
1980	1715	1997	23	85922	100066	19764	6.4	2.0	10.1	312	3.6	15635
1981	1863	1925	23	96433	102732	19455	6.4	1.9	10.2	310	3.6	16051
1982	2036 E	2036 E	23	101088	101088	19932 E	6.4	2.0	10.2	318	3.6	15795
1983	1951 E	1881 E	28	105366	101088	NA	6.5	1.9	NA	289	4.3	15552
<b>SOVIET UNION</b>												
1973	96410	189106	4000	703300	1379507	298733	249.8	13.7	63.3	757	16.3	5522
1974	110590	199470	4100	791300	1427262	317991	252.1	14.0	62.7	791	16.3	5661
1975	125410	207426	4100	892300	1475853	344691	254.5	14.1	60.2	815	16.1	5799
1976	138380	216549	4200	965500	1510899	375573	256.8	14.3	57.7	843	16.4	5883
1977	148130	218941	4200	1057700	1563317	394931	259.0	14.0	55.4	845	16.2	6036
1978	161870	222766	4200	1175600	1617868	413962	261.3	13.8	53.8	852	16.1	6191
1979	179220	227395	4300	1285800	1631434	451442	263.4	13.9	50.4	863	16.3	6193
1980	200330	233304	4300	1418200	1651637	499846	265.5	14.1	46.7	878	16.2	6220
1981	222600	237140	4300	1579000	1682142	527973	267.7	14.1	44.9	885	16.1	6283
1982	243760	243760	4400	1715000	1715000	578300	270.0	14.2	42.2	902	16.3	6351
1983	258000	247525	4400	1843400	1768560	606341	272.5	14.0	40.8	908	16.1	6490
<b>UNITED STATES</b>												
1973	78358	153697	2206	1331300	2611315	511180	210.0	5.9	30.1	731	10.5	12434
1974	85906	15948	2146	1440700	2598580	511220	212.0	6.0	30.3	730	10.1	12257
1975	90948	150427	2098	1556100	2573770	573321	214.0	5.8	26.2	702	9.8	12027
1976	91013	142425	2075	1726400	2701623	604313	215.0	5.3	23.6	662	9.7	12565
1977	100925	149170	2060	1926100	2846843	626317	217.0	5.2	23.8	687	9.5	13119
1978	109247	150346	2033	2162000	2975358	654620	219.0	5.1	23.0	686	9.3	13586
1979	122279	155148	2050	2421000	3071785	665756	221.0	5.1	23.3	702	9.3	13899
1980	143981	167680	2101	2632800	3066162	724684	227.7	5.5	23.1	736	9.2	13465
1981	169888	180985	2168	2942900	3135133	765539	229.8	5.8	23.6	787	9.4	13642
1982	196390	196390	2201	3056900	3056900	785610	232.3	6.4	25.0	845	9.5	13159
1983	217154	208337	2222	3297800	3163913	821209	234.5	6.6	25.4	838	9.5	13492

ANNEX V

KEY SWEDISH DEFENSE FIRMS

Baab-Scania AB (aircraft and missiles,<sup>1</sup> fire-control systems, sights, target materiel, simulators, etc., and cross-country trucks)

Volvo Flygmotor AB (aircraft engines and missiles)

AB Bofors (artillery, ammunition, missiles,<sup>1</sup> explosives and detonators, fire-control equipment, and combat vehicles)

Förenade Fabriksverken (FFV) (The government-owned defense industries group. Manufacture of small-caliber and anti-tank weapons, ammunition, torpedoes, and gunpowder. Maintenance of aircraft, helicopters, and ground-based electronic materiel)

AB Hägglund & Soner (tracked combat and cross-country vehicles)

Ericsson<sup>2</sup> (target-plotting systems, radar, IR applications, lasers, computers, communications systems, radio-link equipment, recognition equipment, etc.)

Karlskronavarvet AB (minelayers, missile carriers, patrol boats, mine-sweepers, submarine sections, and ship maintenance)

SRA Communications AB<sup>2</sup> (presentation and countering systems for aircraft, radio and radio-link equipment, operations-control systems, installation planning, and maintenance work)

Telub AB (maintenance and repair work, installations, testing equipment and consultant work in telecommunications and electronic field)

Philips Elektronikindustrier AB (PEAB) (operations and liaison systems, fire-control systems, radar, homing devices, countermeasure systems, presentation equipment, and electronic units for proximity fuses)

Kockums AB (design and manufacture of submarines)

SATT Electronics AB (telephone and data transmission equipment, radar materiel, measuring devices, and countermeasure systems)

Standard Radio & Telefon AB (SRT) (radio and radio-link equipment and direction finders)

<sup>1</sup> Saab-Scania and Bofors collaborate in missile development and production through the Saab Bofors Missile Corporation (SBMC)

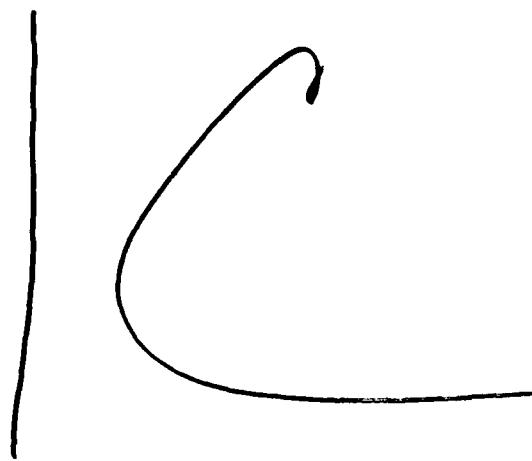
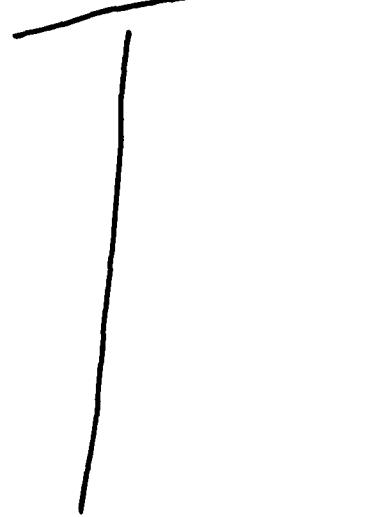
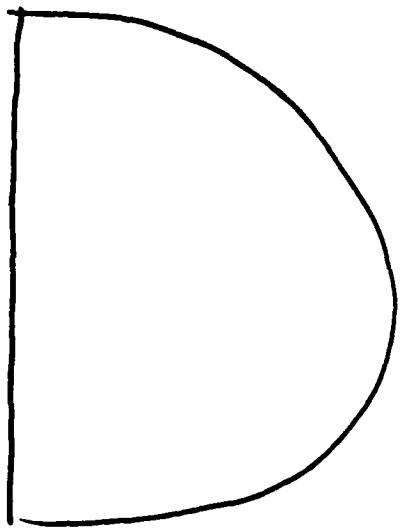
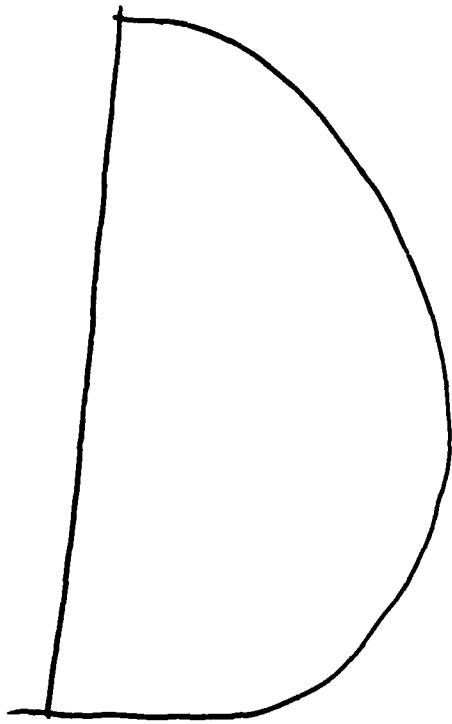
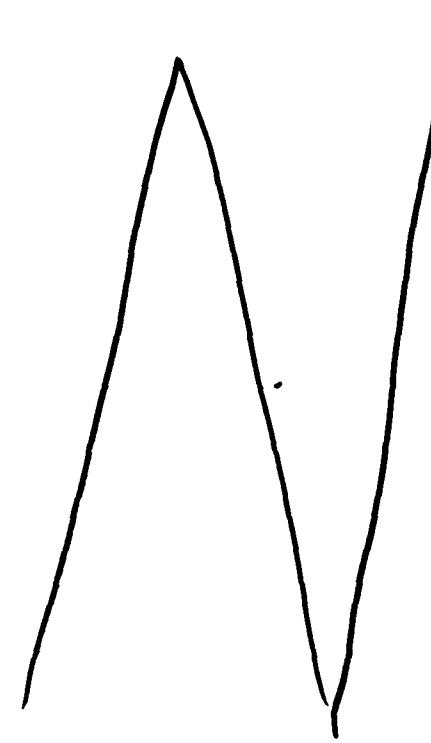
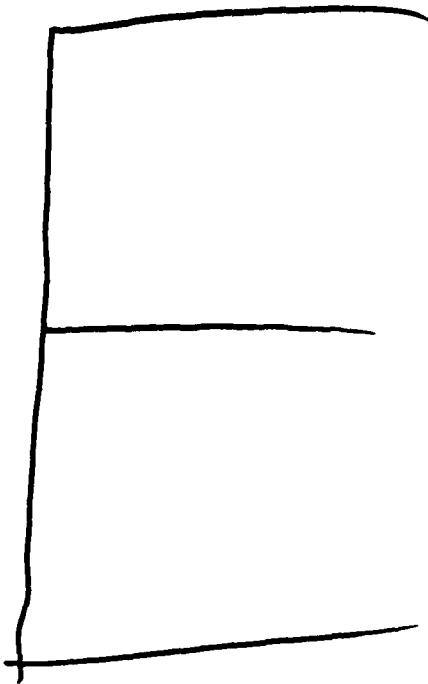
<sup>2</sup> Through merger of SRA Communications AB and Ericsson's divisions for space and military electronics and military telecommunications, a wholly-owned Ericsson subsidiary, Ericsson Radio Systems AB (ERA), was formed in early 1983.

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1973-1983  
By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS a		ARMS EXPORTS a		TOTAL IMPORTS b		TOTAL EXPORTS b		ARMS IMPORTS TOTAL EXPORTS	ARMS EXPORTS TOTAL EXPORTS		
	Million dollars		Million dollars		Million dollars		Million dollars					
	Current	Constant 1982	Current	Constant 1982	Current	Constant 1982	Current	Constant 1982				
<b>SWEDEN</b>												
1973	20	39	10	19	10907	21393	12201	23932	0.1	0.1		
1974	20	36	70	126	16683	30091	15939	28749	0.1	0.4		
1975	20	33	90	148	17450	28862	17384	28752	0.1	0.5		
1976	40	62	50	78	19628	30715	18435	28848	0.2	0.3		
1977	60	88	50	73	20140	29767	19082	28203	0.2	0.3		
1978	60	82	110	151	20589	28334	21786	29982	0.2	0.5		
1979	70	88	120	152	28735	36459	27602	35021	0.2	0.4		
1980	140	163	120	139	33497	39010	30911	35999	0.4	0.4		
1981	110	117	100	106	28834	30717	28627	30496	0.3	0.3		
1982	90	90	180	180	27554	27554	26786	26786	0.3	0.7		
1983	110	105	40	38	26080	25021	27420	26306	0.4	0.1		
<b>DENMARK</b>												
1973	10	19	5	9	7802	15303	6248	12255	0.1	0.1		
1974	40	72	10	18	9927	17905	7719	13922	0.4	0.1		
1975	30	49	0	0	10368	17148	8712	14409	0.2	0.0		
1976	70	109	20	31	12627	19446	9115	14264	0.5	0.2		
1977	70	103	10	14	13265	19606	10065	14876	0.5	0.1		
1978	70	96	5	6	14809	20380	11882	16352	0.4	0.0		
1979	30	38	0	0	18402	23348	14696	18646	0.1	0.0		
1980	200	232	10	11	19428	22625	16982	19777	1.0	0.1		
1981	210	223	20	21	17575	18723	16095	17146	1.1	0.1		
1982	210	210	20	20	16691	16691	15382	15382	1.2	0.1		
1983	150	143	5	4	16526	15855	16027	15376	0.9	0.0		
<b>NORWAY</b>												
1973	50	98	20	39	6289	12335	4725	9268	0.7	0.4		
1974	40	72	30	54	8421	15188	6282	11330	0.4	0.5		
1975	50	82	10	16	9705	16052	7232	11961	0.5	0.1		
1976	60	93	30	46	11121	17403	7951	12442	0.5	0.4		
1977	60	88	20	29	12883	19041	8880	13125	0.4	0.2		
1978	70	96	30	41	11497	15822	10882	14975	0.6	0.3		
1979	40	50	60	76	13706	17390	13546	17187	0.2	0.4		
1980	240	279	80	93	16926	19712	18542	21594	1.4	0.4		
1981	230	245	40	42	15650	16672	18217	19407	1.4	0.2		
1982	290	290	40	40	15475	15475	17586	17586	1.8	0.2		
1983	240	230	40	38	13482	12934	17977	17247	1.7	0.2		
<b>FINLAND</b>												
1973	5	9	0	0	4355	8542	3836	7524	0.1	0.0		
1974	30	54	0	0	6811	12285	5490	9902	0.4	0.0		
1975	50	82	0	0	7626	12613	5503	9101	0.6	0.0		
1976	10	15	0	0	7392	11567	6342	9924	0.1	0.0		
1977	10	14	0	0	7608	11244	7665	11329	0.1	0.0		
1978	80	110	0	0	7866	10825	8570	11794	1.0	0.0		
1979	70	88	80	101	11398	14461	11172	16175	0.6	0.7		
1980	160	186	10	11	15636	18209	14148	16476	1.0	0.1		
1981	70	74	5	5	14192	15119	14005	14919	0.4	0.0		
1982	80	80	10	10	13401	13401	13088	13088	0.5	0.1		
1983	50	47	350	335	12819	12298	12538	12029	0.3	2.8		

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1973-1983  
By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS <sup>a</sup>		ARMS EXPORTS <sup>a</sup>		TOTAL IMPORTS <sup>b</sup>		TOTAL EXPORTS <sup>b</sup>		ARMS IMPORTS 1973- 1983 AVG. \$ MIL.	ARMS EXPORTS 1973- 1983 AVG. \$ MIL.		
	Million dollars		Million dollars		Million dollars		Million dollars					
	Current	Constant 1982	Current	Constant 1982	Current	Constant 1982	Current	Constant 1982				
<b>AUSTRIA</b>												
1973	5	9	10	19	7119	13963	5263	10362	0.0	0.2		
1974	5	9	5	9	9022	16272	7161	12916	0.0	0.1		
1975	5	8	30	49	9394	15537	7519	12436	0.0	0.4		
1976	60	93	60	93	11523	18032	8506	13310	0.5	0.7		
1977	80	118	60	88	14245	21054	9808	14496	0.5	0.6		
1978	50	68	190	261	16019	22045	12175	16755	0.3	1.6		
1979	40	50	100	126	20252	25695	15481	19642	0.1	0.6		
1980	80	93	40	46	24444	28467	17489	20367	0.3	0.2		
1981	70	74	300	319	21043	22417	15841	16875	0.3	1.9		
1982	60	60	50	50	19502	19502	15642	15642	0.3	0.3		
1983	60	57	180	172	19367	18580	15428	14801	0.3	1.2		
<b>SWITZERLAND</b>												
1973	50	93	40	78	11621	22794	9525	18683	0.4	0.4		
1974	50	90	60	108	14445	26054	11934	21525	0.3	0.5		
1975	50	82	150	248	13303	22003	12953	21424	0.3	1.2		
1976	80	125	240	375	14775	23121	14835	23215	0.5	1.6		
1977	70	103	310	458	17940	26516	17614	26034	0.3	1.8		
1978	30	110	290	399	23804	32759	23560	32423	0.3	1.2		
1979	270	342	350	444	29356	37247	26538	33671	0.9	1.3		
1980	40	46	650	757	36341	42322	29632	34509	0.1	2.2		
1981	130	138	340	362	30682	32686	27049	28815	0.4	1.3		
1982	110	110	360	360	28678	28678	26019	26019	0.3	1.4		
1983	200	278	330	316	29192	28006	25591	24552	0.9	1.3		
<b>SOVIET UNION</b>												
1973	220	431	5300	10395	20980	41151	21332	418-2	1.0	24.8		
1974	210	378	4100	7395	24861	44841	27374	49374	0.8	15.0		
1975	300	496	4000	6616	37070	61313	33407	55254	0.8	12.0		
1976	500	782	5300	8293	38212	59797	37269	58521	1.3	14.2		
1977	750	1108	6600	9755	40926	60490	45227	66847	1.8	14.6		
1978	1100	1513	7700	10596	50798	69908	52435	72161	2.2	14.7		
1979	1000	1268	12500	15860	57958	73537	64913	82362	1.7	19.3		
1980	910	1059	11600	13509	68473	79743	76437	89018	1.3	15.2		
1981	685	729	11200	11931	73158	77936	79377	84562	0.9	14.1		
1982	685	685	11300	11300	77847	77847	87168	87168	0.9	13.0		
1983	1150	1103	9800	9402	80440	77174	91648	87927	1.4	10.7		
<b>UNITED STATES</b>												
1973	170	333	5400	10592	74280	145698	71404	140057	0.2	7.6		
1974	120	216	5000	9018	110875	199984	98552	177757	0.1	5.1		
1975	140	231	4900	8104	105880	175124	108112	178815	0.1	4.5		
1976	110	172	5900	9232	132493	207336	115413	180608	0.0	5.1		
1977	120	177	6700	9902	160411	237093	121232	179185	0.0	5.5		
1978	120	165	6500	8945	186043	256036	143766	197851	0.0	4.5		
1979	130	164	6000	7612	222228	281964	182025	230954	0.0	3.3		
1980	140	163	6500	7569	256984	299283	220786	257127	0.0	2.9		
1981	210	223	8600	9161	273352	291207	233739	249007	0.0	3.7		
1982	430	430	9300	9300	254884	254884	212276	212276	0.1	4.4		
1983	500	479	10600	10169	269878	258921	200538	192396	0.1	5.3		



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